

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

Claims 1 to 9. (Canceled).

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10. (Currently Amended) A programmable controller, comprising:  
a processing unit;  
a display screen including a menu-assisted user interface;  
an operator unit including a button, the button capable of being switched to an active mode using a programmable function;  
at least one signal input terminal;  
at least one signal output terminal; and  
a housing, the processing unit, the display screen, the operator unit, the at least one signal input terminal and the at least one signal output terminal being disposed in the housing;

wherein a switching function of the controller programmable in a programmed sequence according to predetermined functions using the menu-assisted user interface, and wherein an operation of the button is capable of affecting a switching sequence of the switching function when the button is in the active mode.

C 1  
11. (Currently Amended) The controller as recited in claim 10 wherein, an operation of the button can simulate [[the]] at least one signal input when the button is in the active mode.

12. (Previously Presented) The controller as recited in claim 11 wherein the programmed sequence of the switching function is interrupted when the button is operated in the active mode.

13. (Previously Presented) The controller as recited in claim 10 wherein the switching function can be interrupted by operation of the button in the active mode.

14. (Previously Presented) The controller as recited in claim 10 wherein the operation of the button is performable at any point of the programmable switching function.

15. (Previously Presented) The controller as recited in claim 10 further comprising a second button capable of affecting the switching function.

C1 16. (Previously Presented) The controller as recited in claim 10 further comprising a second button and wherein the second button is capable of being switched to an active mode.

17. (Previously Presented) The controller as recited in claim 10 wherein the display screen is capable of displaying an instruction to operate the active button.

18. (Previously Presented) The controller as recited in claim 10 wherein the display screen is capable of displaying an instruction to operate the active button and wherein the instruction to operate the active button is accompanied by an acoustic signal.

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19. (Currently Amended) The controller according to claim 10, wherein the switching function of the controller is arranged to switch between input voltages applied to the at least one signal input terminal and the at least one signal output terminal.

C2 20. (Currently Amended) A programmable controller, comprising:  
a processing unit;  
a display screen;  
an operator unit including a button switchable to an active button in accordance with a programmable function;  
at least one signal input terminal;  
at least one signal output terminal;  
a common housing, the processing unit, the display screen, the operator unit, the at least one signal input terminal and the at least one signal output terminal accommodated in the common housing; and  
an arrangement configured to program switching functions on the basis of a predetermined function in accordance with a menu-assisted user interface on the display screen;

wherein a sequence of a switching function is dependent on operation of the button.

21. (Currently Amended) A programmable controller, comprising:

a processing means;

a display means;

operating means including a button switchable to an active button in accordance with a programmable function;

at least one signal input terminal;

at least one signal output terminal;

a common housing, the processing means, the display means, the operating means, the at least one signal input terminal and the at least one signal output terminal accommodated in the common housing; and

means for programming switching functions on the basis of a predetermined function in accordance with a menu-assisted user interface on the display means;

wherein a sequence of a switching function is dependent on operation of the button.

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22. (New) A method for directing current by a programmable controller including a processing unit, a display screen, at least one signal input terminal, at least one signal output terminal, a common housing, the processing unit, the display screen, the signal input terminal and the signal output terminal accommodated in the common housing, and an arrangement configured to program switching functions on the basis of a predetermined function in accordance with a menu-assisted user interface on the display screen, a sequence of a switching function dependent on operation of the button, comprising the steps of:

entering a program into the processing unit including switching functions configured to control current flow between the at least one input terminal and the at least one output terminal; and

simulating a current in at least one of the at least one input terminals by using the active button.

23. (New) The method of claim 22, wherein the programmable controller further includes operating means including a button switchable to the active button in accordance with a programmable function and further including the step of switching the button to the active button.

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